



SEQUENCE LISTING

<110> Hauptmann, Rudolph
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Stratowa, Christian

<120> TNF Receptors, TNF Binding Proteins and DNAs Coding for
Them

<130> 98-385-H

<140> 09/899,422
<141> 2001-07-03

<150> 09/525,998
<151> 2000-03-15

<150> 08/383,676
<151> 1995-02-01

<150> 08/153,287
<151> 1993-11-17

<150> 07/821,750
<151> 1992-01-02

<150> 07/511,430
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<170> PatentIn Ver. 2.0

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<222> (88)..(120)
<223> portion of TNF-BP pro protein cleaved by
extracellular proteases following secretion

<220>
<221> misc_feature
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extracellular proteases following secretion

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gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga ctg gtc cct	96
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro	
20 25 30	
cac cta ggg gac agg gag aag aga gat agt gtg tgt ccc caa gga aaa	144
His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys	
35 40 45	
tat atc cac cct caa aat aat tcg att tgc tgt acc aag tgc cac aaa	192
Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys	
50 55 60	
gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag gat acg gac	240
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp	
65 70 75 80	
tgc agg gag tgt gag agc ggc tcc ttc acc gct tca gaa aac cac ctc	288
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu	
85 90 95	
aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa atg ggt cag gtg	336
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val	
100 105 110	
gag atc tct tct tgc aca gtg gac cgg gac acc gtg tgt ggc tgc agg	384
Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg	
115 120 125	
aag aac cag tac cgg cat tat tgg agt gaa aac ctt ttc cag tgc ttc	432
Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe	
130 135 140	
aat tgc agc ctc tgc ctc aat ggg acc gtg cac ctc tcc tgc cag gag	480
Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu	
145 150 155 160	
aaa cag aac acc gtg tgc acc tgc cat gca ggt ttc ttt cta aga gaa	528
Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu	
165 170 175	
aac gag tgt gtc tcc tgt agt aac tgt aag aaa agc ctg gag tgc acg	576
Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr	
180 185 190	
aag ttg tgc cta ccc cag att gag aat gtt aag ggc act gag gac tca	624
Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser	
195 200 205	
ggc acc aca gtg ctg ttg ccc ctg gtc att ttc ttt ggt ctt tgc ctt	672
Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu	

210	215	220	
tta tcc ctc ctc ttc att ggt tta atg tat cgc tac caa cgg tgg aag			720
Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys			
225	230	235	240
tcc aag ctc tac tcc att gtt tgt ggg aaa tcg aca cct gaa aaa gag			768
Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu			
	245	250	255
ggg gag ctt gaa gga act act act aag ccc ctg gcc cca aac cca agc			816
Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser			
	260	265	270
ttc agt ccc act cca ggc ttc acc ccc acc ctg ggc ttc agt ccc gtg			864
Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val			
	275	280	285
ccc agt tcc acc ttc acc tcc agc tcc acc tat acc ccc ggt gac tgt			912
Pro Ser Ser Thr Phe Thr Ser Ser Ser Thr Tyr Thr Pro Gly Asp Cys			
	290	295	300
ccc aac ttt gcg gct ccc cgc aga gag gtg gca cca ccc tat cag ggg			960
Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly			
305	310	315	320
gct gac ccc atc ctt gcg aca gcc ctc gcc tcc gac ccc atc ccc aac			1008
Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn			
	325	330	335
ccc ctt cag aag tgg gag gac agc gcc cac aag cca cag agc cta gac			1056
Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp			
	340	345	350
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Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Val Glu Asn Val Pro Pro			
	355	360	365
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Leu Arg Trp Lys Glu Phe Val Arg Arg Leu Gly Leu Ser Asp His Glu			
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Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln			
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tac agc atg ctg gcg acc tgg agg cgg cgc acg ccg cgg cgc gag gcc			1248
Tyr Ser Met Leu Ala Thr Trp Arg Arg Arg Thr Pro Arg Arg Glu Ala			
	405	410	415
acg ctg gag ctg ctg gga cgc gtg ctc cgc gac atg gac ctg ctg ggc			1296
Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly			
	420	425	430
tgc ctg gag gac atc gag gag gcg ctt tgc ggc ccc gcc gcc ctc ccg			1344
Cys Leu Glu Asp Ile Glu Glu Ala Leu Cys Gly Pro Ala Ala Leu Pro			
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 Pro Ala Pro Ser Leu Leu Arg
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1368

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 <212> PRT
 <213> Homo sapiens

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 His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
 35 40 45
 Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60
 Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
 65 70 75 80
 Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
 85 90 95
 Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
 100 105 110
 Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
 115 120 125
 Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
 130 135 140
 Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
 145 150 155 160
 Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
 165 170 175
 Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
 180 185 190
 Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser
 195 200 205
 Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu
 210 215 220
 Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys
 225 230 235 240

Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu
 245 250 255
 Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser
 260 265 270
 Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val
 275 280 285
 Pro Ser Ser Thr Phe Thr Ser Ser Ser Thr Tyr Thr Pro Gly Asp Cys
 290 295 300
 Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly
 305 310 315 320
 Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn
 325 330 335
 Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp
 340 345 350
 Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Val Glu Asn Val Pro Pro
 355 360 365
 Leu Arg Trp Lys Glu Phe Val Arg Arg Leu Gly Leu Ser Asp His Glu
 370 375 380
 Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln
 385 390 395 400
 Tyr Ser Met Leu Ala Thr Trp Arg Arg Arg Thr Pro Arg Arg Glu Ala
 405 410 415
 Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly
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 <213> Homo sapiens

<220>
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 <222> (1)..(483)

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att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt	96
Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys	
20 25 30	
cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc tcc	144
Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser	
35 40 45	
ttc acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa	192
Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys	
50 55 60	
tgc cga aag gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac	240
Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp	
65 70 75 80	
cgg gac acc gtg tgt ggc tgc agg aag aac cag tac cgg cat tat tgg	288
Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp	
85 90 95	
agt gaa aac ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg	336
Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly	
100 105 110	
acc gtg cac ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc	384
Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys	
115 120 125	
cat gca ggt ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac	432
His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn	
130 135 140	
tgt aag aaa agc ctg gag tgc acg aag ttg tgc cta ccc cag att gag	480
Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu	
145 150 155 160	
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Asn	

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 <213> Homo sapiens

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 20 25 30
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 35 40 45
 Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys
 50 55 60

Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp
 65 70 75 80
 Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp
 85 90 95
 Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly
 100 105 110
 Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys
 115 120 125
 His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn
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 Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu
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<210> 5
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<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<220>
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 <222> (1)..(486)

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 tcg att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac 96
 Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp
 20 25 30
 tgt cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc 144
 Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly
 35 40 45
 tcc ttc acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc 192
 Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser
 50 55 60
 aaa tgc cga aag gaa atg ggt cag gtg gag atc tct tct tgc aca gtg 240
 Lys Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val
 65 70 75 80

gac cgg gac acc gtg tgt ggc tgc agg aag aac cag tac cgg cat tat	288
Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr	
85 90 95	
tgg agt gaa aac ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat	336
Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn	
100 105 110	
ggg acc gtg cac ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc	384
Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr	
115 120 125	
tgc cat gca ggt ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt	432
Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser	
130 135 140	
aac tgt aag aaa agc ctg gag tgc acg aag ttg tgc cta ccc cag att	480
Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile	
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gag aat	486
Glu Asn	

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<211> 162

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

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35 40 45	
Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser	
50 55 60	
Lys Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val	
65 70 75 80	
Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr	
85 90 95	
Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn	
100 105 110	
Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr	
115 120 125	

Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser
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Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile
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Glu Asn

<210> 7

<211> 633

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

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<221> CDS

<222> (1)..(633)

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gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga ctg gtc cct 96
 Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
 20 25 30

cac cta ggg gac agg gag aag aga gat agt gtg tgt ccc caa gga aaa 144
 His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
 35 40 45

tat atc cac cct caa aat aat tcg att tgc tgt acc aag tgc cac aaa 192
 Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60

gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag gat acg gac 240
 Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
 65 70 75 80

tgc agg gag tgt gag agc ggc tcc ttc acc gct tca gaa aac cac ctc 288
 Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
 85 90 95

aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa atg ggt cag gtg 336
 Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
 100 105 110

gag atc tct tct tgc aca gtg gac cgg gac acc gtg tgt ggc tgc agg 384
 Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
 115 120 125

aag aac cag tac cgg cat tat tgg agt gaa aac ctt ttc cag tgc ttc	432
Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe	
130 135 140	
aat tgc agc ctc tgc ctc aat ggg acc gtg cac ctc tcc tgc cag gag	480
Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu	
145 150 155 160	
aaa cag aac acc gtg tgc acc tgc cat gca ggt ttc ttt cta aga gaa	528
Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu	
165 170 175	
aac gag tgt gtc tcc tgt agt aac tgt aag aaa agc ctg gag tgc acg	576
Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr	
180 185 190	
aag ttg tgc cta ccc cag att gag aat gtt aag ggc act gag gac tca	624
Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser	
195 200 205	
ggc acc aca	633
Gly Thr Thr	
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<210> 8
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

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His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys	
35 40 45	
Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys	
50 55 60	
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp	
65 70 75 80	
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu	
85 90 95	
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val	
100 105 110	
Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg	

115	120	125
Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe		
130	135	140
Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu		
145	150	155
Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu		
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Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr		
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Gly Thr Thr		
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

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<221> CDS

<222> (1)..(549)

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ccc caa gga aaa tat atc cac cct caa aat aat tcg att tgc tgt acc	96
Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr	
20 25 30	
aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg ggg	144
Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly	
35 40 45	
cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc acc gct tca	192
Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser	
50 55 60	
gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa	240
Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu	
65 70 75 80	
atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg gac acc gtg	288
Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val	

85										90					95					
tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	tgg	agt	gaa	aac	ctt	336				
Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn	Leu					
100					105					110										
ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	ggg	acc	gtg	cac	ctc	384				
Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	Gly	Thr	Val	His	Leu					
115					120					125										
tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	tgc	cat	gca	ggg	ttc	432				
Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	Cys	His	Ala	Gly	Phe					
130					135					140										
ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	aac	tgt	aag	aaa	agc	480				
Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	Asn	Cys	Lys	Lys	Ser					
145					150					155					160					
ctg	gag	tgc	acg	aag	ttg	tgc	cta	ccc	cag	att	gag	aat	gtt	aag	ggc	528				
Leu	Glu	Cys	Thr	Lys	Leu	Cys	Leu	Pro	Gln	Ile	Glu	Asn	Val	Lys	Gly					
165					170					175										
act	gag	gac	tca	ggc	acc	aca										549				
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<223> Description of Artificial Sequence: recombinant																				
TNF-BP sequence																				
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		35					40					45								
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Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	Lys	Cys	Arg	Lys	Glu					
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Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	Asp	Arg	Asp	Thr	Val					
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Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	Trp	Ser	Glu	Asn	Leu					
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Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu
 115 120 125
 Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe
 130 135 140
 Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser
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 Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly
 165 170 175
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<210> 11
 <211> 600
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<220>
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 <222> (1)..(600)

<400> 11
 atg ggc ctc tcc acc gtg cct gac ctg ctg ctg cca ctg gtg ctc ctg 48
 Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
 1 5 10 15
 gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga gat agt gtg 96
 Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Asp Ser Val
 20 25 30
 tgt ccc caa gga aaa tat atc cac cct caa aat aat tcg att tgc tgt 144
 Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys
 35 40 45
 acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg 192
 Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro
 50 55 60
 ggg cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc acc gct 240
 Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala
 65 70 75 80
 tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc cga aag 288
 Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys
 85 90 95
 gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg gac acc 336
 Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr

100	105	110	
gtg tgt ggc tgc agg aag aac cag tac cgg cat tat tgg agt gaa aac			384
Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn			
115	120	125	
ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg acc gtg cac			432
Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His			
130	135	140	
ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc cat gca ggt			480
Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly			
145	150	155	160
ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac tgt aag aaa			528
Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys			
165	170	175	
agc ctg gag tgc acg aag ttg tgc cta ccc cag att gag aat gtt aag			576
Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys			
180	185	190	
ggc act gag gac tca ggc acc aca			600
Gly Thr Glu Asp Ser Gly Thr Thr			
195	200		

<210> 12

<211> 200

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<400> 12

Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
1 5 10 15

Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Asp Ser Val
20 25 30

Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys
35 40 45

Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro
50 55 60

Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala
65 70 75 80

Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys
85 90 95

Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr
100 105 110

Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn
115 120 125

Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His
130 135 140

Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly
145 150 155 160

Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys
165 170 175

Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys
180 185 190

Gly Thr Glu Asp Ser Gly Thr Thr
195 200

<210> 13
<211> 603
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<220>
<221> CDS
<222> (1)..(603)

<400> 13
atg ggc ctc tcc acc gtg cct gac ctg ctg ctg cca ctg gtg ctc ctg 48
Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
1 5 10 15

gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga ctg gtc cct 96
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
20 25 30

cac cta ggg gac agg gag aag aga gat agt gtg tgt ccc caa gga aaa 144
His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
35 40 45

tat atc cac cct caa aat aat tcg att tgc tgt acc aag tgc cac aaa 192
Tyr Ile His Pro Gln Asn Ser Ile Cys Cys Thr Lys Cys His Lys
50 55 60

gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag gat acg gac 240
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
65 70 75 80

tgc agg gag tgt gag agc ggc tcc ttc acc gct tca gaa aac cac ctc 288
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
85 90 95

aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa atg ggt cag gtg	336
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val	
100 105 110	
gag atc tct tct tgc aca gtg gac cgg gac acc gtg tgt ggc tgc agg	384
Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg	
115 120 125	
aag aac cag tac cgg cat tat tgg agt gaa aac ctt ttc cag tgc ttc	432
Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe	
130 135 140	
aat tgc agc ctc tgc ctc aat ggg acc gtg cac ctc tcc tgc cag gag	480
Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu	
145 150 155 160	
aaa cag aac acc gtg tgc acc tgc cat gca ggt ttc ttt cta aga gaa	528
Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu	
165 170 175	
aac gag tgt gtc tcc tgt agt aac tgt aag aaa agc ctg gag tgc acg	576
Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr	
180 185 190	
aag ttg tgc cta ccc cag att gag aat	603
Lys Leu Cys Leu Pro Gln Ile Glu Asn	
195 200	

<210> 14

<211> 201

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<400> 14

Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu	
1 5 10 15	
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro	
20 25 30	
His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys	
35 40 45	
Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys	
50 55 60	
Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp	
65 70 75 80	
Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu	
85 90 95	

Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
100 105 110

Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
115 120 125

Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
130 135 140

Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
145 150 155 160

Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
165 170 175

Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
180 185 190

Lys Leu Cys Leu Pro Gln Ile Glu Asn
195 200

<210> 15
<211> 519
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<220>
<221> CDS
<222> (1)..(519)

<400> 15
atg ctg gtc cct cac cta ggg gac agg gag aag aga gat agt gtg tgt 48
Met Leu Val Pro His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys
1 5 10 15

ccc caa gga aaa tat atc cac cct caa aat aat tcg att tgc tgt acc 96
Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr
20 25 30

aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg ggg 144
Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly
35 40 45

cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc acc gct tca 192
Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser
50 55 60

gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc cga aag gaa 240
Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu
65 70 75 80

atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg gac acc gtg	288
Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val	
85 90 95	
tgt ggc tgc agg aag aac cag tac cgg cat tat tgg agt gaa aac ctt	336
Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu	
100 105 110	
ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg acc gtg cac ctc	384
Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu	
115 120 125	
tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc cat gca ggt ttc	432
Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe	
130 135 140	
ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac tgt aag aaa agc	480
Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser	
145 150 155 160	
ctg gag tgc acg aag ttg tgc cta ccc cag att gag aat	519
Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn	
165 170	

<210> 16

<211> 173

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<400> 16

Met Leu Val Pro His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys	
1 5 10 15	
Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr	
20 25 30	
Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly	
35 40 45	
Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser	
50 55 60	
Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu	
65 70 75 80	
Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val	
85 90 95	
Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu	
100 105 110	
Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu	

115	120	125
Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe		
130	135	140
Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser		
145	150	155
Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn		
165	170	

<210> 17
 <211> 570
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<220>
 <221> CDS
 <222> (1)..(570)

<400> 17	
atg ggc ctc tcc acc gtg cct gac ctg ctg ctg cca ctg gtg ctc ctg	48
Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu	
1 5 10 15	
gag ctg ttg gtg gga ata tac ccc tca ggg gtt att gga gat agt gtg	96
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Asp Ser Val	
20 25 30	
tgt ccc caa gga aaa tat atc cac cct caa aat aat tcg att tgc tgt	144
Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys	
35 40 45	
acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg	192
Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro	
50 55 60	
ggg cag gat acg gac tgc agg gag tgt gag agc ggc tcc ttc acc gct	240
Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala	
65 70 75 80	
tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa tgc cga aag	288
Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys	
85 90 95	
gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac cgg gac acc	336
Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr	
100 105 110	
gtg tgt ggc tgc agg aag aac cag tac cgg cat tat tgg agt gaa aac	384
Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn	
115 120 125	

ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg acc gtg cac	432
Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His	
130 135 140	
ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc cat gca ggt	480
Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly	
145 150 155 160	
ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac tgt aag aaa	528
Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys	
165 170 175	
agc ctg gag tgc acg aag ttg tgc cta ccc cag att gag aat	570
Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn	
180 185 190	

<210> 18
 <211> 190
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<400> 18

Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu	
1 5 10 15	
Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Asp Ser Val	
20 25 30	
Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys	
35 40 45	
Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro	
50 55 60	
Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala	
65 70 75 80	
Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys	
85 90 95	
Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr	
100 105 110	
Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn	
115 120 125	
Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His	
130 135 140	
Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly	
145 150 155 160	

Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys
165 170 175

Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn
180 185 190

<210> 19

<211> 516

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant
TNF-BP sequence

<220>

<221> CDS

<222> (1)..(516)

<400> 19

atg	gat	agt	gtg	tgt	ccc	caa	gga	aaa	tat	atc	cac	cct	caa	aat	aat	48
Met	Asp	Ser	Val	Cys	Pro	Gln	Gly	Lys	Tyr	Ile	His	Pro	Gln	Asn	Asn	
1				5					10					15		

tgc	att	tgc	tgt	acc	aag	tgc	cac	aaa	gga	acc	tac	ttg	tac	aat	gac	96
Ser	Ile	Cys	Cys	Thr	Lys	Cys	His	Lys	Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	
			20					25					30			

tgt	cca	ggc	ccg	ggg	cag	gat	acg	gac	tgc	agg	gag	tgt	gag	agc	ggc	144
Cys	Pro	Gly	Pro	Gly	Gln	Asp	Thr	Asp	Cys	Arg	Glu	Cys	Glu	Ser	Gly	
		35				40					45					

tcc	ttc	acc	gct	tca	gaa	aac	cac	ctc	aga	cac	tgc	ctc	agc	tgc	tcc	192
Ser	Phe	Thr	Ala	Ser	Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser	
	50					55				60						

aaa	tgc	cga	aag	gaa	atg	ggg	cag	gtg	gag	atc	tct	tct	tgc	aca	gtg	240
Lys	Cys	Arg	Lys	Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val	
65					70				75						80	

gac	cgg	gac	acc	gtg	tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	288
Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr	
			85					90						95		

tgg	agt	gaa	aac	ctt	ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	336
Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn	
			100					105					110			

ggg	acc	gtg	cac	ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	384
Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr	
		115					120					125				

tgc	cat	gca	ggg	ttc	ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	432
Cys	His	Ala	Gly	Phe	Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser	
	130					135					140					

aac tgt aag aaa agc ctg gag tgc acg aag ttg tgc cta ccc cag att 480
 Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile
 145 150 155 160

gag aat gtt aag ggc act gag gac tca ggc acc aca 516
 Glu Asn Val Lys Gly Thr Glu Asp Ser Gly Thr Thr
 165 170

<210> 20
 <211> 172
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: recombinant
 TNF-BP sequence

<400> 20
 Met Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn
 1 5 10 15
 Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp
 20 25 30
 Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly
 35 40 45
 Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser
 50 55 60
 Lys Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val
 65 70 75 80
 Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr
 85 90 95
 Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn
 100 105 110
 Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr
 115 120 125
 Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser
 130 135 140
 Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile
 145 150 155 160
 Glu Asn Val Lys Gly Thr Glu Asp Ser Gly Thr Thr
 165 170

<210> 21
 <211> 1334
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: cDNA insert of
lambdaTNF-BP15 and pTNF-BP15 vectors

<220>

<221> CDS

<222> (213)..(1325)

<400> 21

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gaattctctg gactgaggct ccagttctgg cctttggggg tcaagatcac tgggaccagg 60
ccgtgatctc tatgcccgag tctcaaccct caactgtcac cccaaggcac ttgggacgct 120
ctggacagac cgagtcccgg gaagccccag cactgccgct gccacactgc cctgagccca 180
aatgggcgag tgagaggcca tagctgtctg gc atg ggc ctc tcc acc gtg cct 233
                               Met Gly Leu Ser Thr Val Pro
                               1                               5
gac ctg ctg ctg cca ctg gtg ttc ctg gag ctg ttg gtg gga ata tac 281
Asp Leu Leu Leu Pro Leu Val Phe Leu Glu Leu Leu Val Gly Ile Tyr
      10                               15                               20
ccc tca ggg gtt att gga ctg gtc cct cac cta ggg gac agg gag aag 329
Pro Ser Gly Val Ile Gly Leu Val Pro His Leu Gly Asp Arg Glu Lys
      25                               30                               35
aga gat agt gtg tgt ccc caa gga aaa tat atc cac cct caa aat aat 377
Arg Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn
      40                               45                               50                               55
tcg att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac 425
Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp
      60                               65                               70
tgt cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc 473
Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly
      75                               80                               85
tcc ttc acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc 521
Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser
      90                               95                               100
aaa tgc cga aag gaa atc ggt cag gtg gag atc tct tct tgc aca gtg 569
Lys Cys Arg Lys Glu Ile Gly Gln Val Glu Ile Ser Ser Cys Thr Val
      105                               110                               115
gac cgg gac acc gtg tgt ggc tgc agg aag aac cag tac cgg cat tat 617
Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr
      120                               125                               130                               135
tgg agt gaa aac ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat 665
Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn
      140                               145                               150
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ggg acc gtg cac ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc	713
Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr	
155 160 165	
tgc cat gca ggt ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt	761
Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser	
170 175 180	
aac tgt aag aaa agc ctg gag tgc agg aag ttg tgc cta ccc cag att	809
Asn Cys Lys Lys Ser Leu Glu Cys Arg Lys Leu Cys Leu Pro Gln Ile	
185 190 195	
gag aat gtt aag ggc act gag gac tca ggc acc aca gtg ctg ttg ccc	857
Glu Asn Val Lys Gly Thr Glu Asp Ser Gly Thr Thr Val Leu Leu Pro	
200 205 210 215	
ctg gtc att ttc ttt ggt ctt tgc ctt tta tcc ctc ctc ttc att ggt	905
Leu Val Ile Phe Phe Gly Leu Cys Leu Leu Ser Leu Leu Phe Ile Gly	
220 225 230	
tta atg tat cgc tac caa cgg tgg aag tcc aag ctc tac tcc att gtt	953
Leu Met Tyr Arg Tyr Gln Arg Trp Lys Ser Lys Leu Tyr Ser Ile Val	
235 240 245	
tgt ggg aaa tcg aca cct gaa aaa gag ggg gag ctt gaa gga act act	1001
Cys Gly Lys Ser Thr Pro Glu Lys Glu Gly Glu Leu Glu Gly Thr Thr	
250 255 260	
act aag ccc ctg gcc cca aac cca agc ttc agt ccc act cca ggc ttc	1049
Thr Lys Pro Leu Ala Pro Asn Pro Ser Phe Ser Pro Thr Pro Gly Phe	
265 270 275	
acc ccc acc ctg ggc ttc agt ccc gtg ccc agt tcc acc ttc acc tcc	1097
Thr Pro Thr Leu Gly Phe Ser Pro Val Pro Ser Ser Thr Phe Thr Ser	
280 285 290 295	
agc tcc acc tat acc ccc ggt gac tgt ccc aac ttt gcg gct ccc cgc	1145
Ser Ser Thr Tyr Thr Pro Gly Asp Cys Pro Asn Phe Ala Ala Pro Arg	
300 305 310	
aga gag gtg gca cca ccc tat cag ggg gct gac ccc atc ctt gcg aca	1193
Arg Glu Val Ala Pro Pro Tyr Gln Gly Ala Asp Pro Ile Leu Ala Thr	
315 320 325	
gcc ctc gcc tcc gac ccc atc ccc aac ccc ctt cag aag tgg gag gac	1241
Ala Leu Ala Ser Asp Pro Ile Pro Asn Pro Leu Gln Lys Trp Glu Asp	
330 335 340	
agc gcc cac aag cca cag agc cta gac act gat gac ccc gcg acg ctg	1289
Ser Ala His Lys Pro Gln Ser Leu Asp Thr Asp Pro Ala Thr Leu	
345 350 355	
tac gcc gtg gtg gag aac gtg ccc ccg ttg cgc tgg aaggaattc	1334
Tyr Ala Val Val Glu Asn Val Pro Pro Leu Arg Trp	
360 365 370	

<210> 22
 <211> 371
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: cDNA insert of
 lambdaTNF-BP15 and pTNF-BP15 vectors

<400> 22

Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Phe Leu
 1 5 10 15

Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
 20 25 30

His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
 35 40 45

Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60

Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
 65 70 75 80

Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
 85 90 95

Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Ile Gly Gln Val
 100 105 110

Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
 115 120 125

Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
 130 135 140

Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
 145 150 155 160

Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
 165 170 175

Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Arg
 180 185 190

Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser
 195 200 205

Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu
 210 215 220

Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys
 225 230 235 240

Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu
 245 250 255

Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser
 260 265 270
 Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val
 275 280 285
 Pro Ser Ser Thr Phe Thr Ser Ser Ser Thr Tyr Thr Pro Gly Asp Cys
 290 295 300
 Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly
 305 310 315 320
 Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn
 325 330 335
 Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp
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 355 360 365
 Leu Arg Trp
 370

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<211> 2173

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: raTNF-R8

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<221> CDS

<222> (245)..(1627)

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gggctcacgc tgccaacacc cgggccacct ggtccgatcg tcttacttca ttcaccagcg 180
ttgccaattg ctgccctgtc cccagcccca atgggggagt gagagaggcc actgccggcc 240
ggac atg ggt ctc ccc atc gtg cct ggc ctg ctg ctg tca ctg gtg ctc 289
Met Gly Leu Pro Ile Val Pro Gly Leu Leu Ser Leu Val Leu
1 5 10 15
ctg gct ctg ctg atg ggg ata cac cca tca ggg gtc acc gga ctg gtt 337
Leu Ala Leu Leu Met Gly Ile His Pro Ser Gly Val Thr Gly Leu Val
20 25 30
cct tct ctt ggt gac cgg gag aag agg gat aat ttg tgt ccc cag gga 385
Pro Ser Leu Gly Asp Arg Glu Lys Arg Asp Asn Leu Cys Pro Gln Gly
35 40 45
aag tat gcc cat cca aag aat aat tcc atc tgc tgc acc aag tgc cac 433
Lys Tyr Ala His Pro Lys Asn Asn Ser Ile Cys Cys Thr Lys Cys His
50 55 60
aaa gga acc tac ttg gtg agt gac tgt cca agc cca ggg cag gaa aca 481
Lys Gly Thr Tyr Leu Val Ser Asp Cys Pro Ser Pro Gly Gln Glu Thr
65 70 75
gtc tgc gag ctc tct cat aaa ggc acc ttt aca gct tcg cag aac cac 529
Val Cys Glu Leu Ser His Lys Gly Thr Phe Thr Ala Ser Gln Asn His
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gtc aga cag tgt ctc agt tgc aag aca tgt cgg aaa gaa atg ttc cag 577
Val Arg Gln Cys Leu Ser Cys Lys Thr Cys Arg Lys Glu Met Phe Gln
100 105 110
gtg gag att tct cct tgc aaa gct gac atg gac acc gtg tgt ggc tgc 625
Val Glu Ile Ser Pro Cys Lys Ala Asp Met Asp Thr Val Cys Gly Cys
115 120 125
aag aag aac caa ttc cag cgc tac ctg agt gag acg cat ttc cag tgt 673
Lys Lys Asn Gln Phe Gln Arg Tyr Leu Ser Glu Thr His Phe Gln Cys
130 135 140
gtg gac tgc agc ccc tgc ttc aat ggc acc gtg aca atc ccc tgt aag 721
Val Asp Cys Ser Pro Cys Phe Asn Gly Thr Val Thr Ile Pro Cys Lys
145 150 155
gag aaa cag aac acc gtg tgt aac tgc cac gca gga ttc ttt cta agc 769
Glu Lys Gln Asn Thr Val Cys Asn Cys His Ala Gly Phe Phe Leu Ser
160 165 170 175
gga aat gag tgc acc cct tgc agc cac tgc aag aaa aat cag gaa tgt 817
Gly Asn Glu Cys Thr Pro Cys Ser His Cys Lys Lys Asn Gln Glu Cys
180 185 190
atg aag ctg tgc cta cct cca gtt gca aat gtc aca aac ccc cag gac 865
Met Lys Leu Cys Leu Pro Pro Val Ala Asn Val Thr Asn Pro Gln Asp
195 200 205

tca ggt act gcc gtg ctg ttg cct ctg gtt atc ttc cta ggt ctt tgc	913
Ser Gly Thr Ala Val Leu Leu Pro Leu Val Ile Phe Leu Gly Leu Cys	
210 215 220	
ctt tta ttc ttt atc tgc atc agt cta ctg tgc cga tat ccc cag tgg	961
Leu Leu Phe Phe Ile Cys Ile Ser Leu Leu Cys Arg Tyr Pro Gln Trp	
225 230 235	
agg ccc agg gtc tac tcc atc att tgt agg gat tca gct cct gtc aaa	1009
Arg Pro Arg Val Tyr Ser Ile Ile Cys Arg Asp Ser Ala Pro Val Lys	
240 245 250 255	
gag gtg gag ggt gaa gga att gtt act aag ccc cta act cca gcc tct	1057
Glu Val Glu Gly Glu Gly Ile Val Thr Lys Pro Leu Thr Pro Ala Ser	
260 265 270	
atc cca gcc ttc agc ccc aac ccc ggc ttc aac ccc act ctg ggc ttc	1105
Ile Pro Ala Phe Ser Pro Asn Pro Gly Phe Asn Pro Thr Leu Gly Phe	
275 280 285	
agc acc acc cca cgc ttc agt cat cct gtc tcc agt acc ccc atc agc	1153
Ser Thr Thr Pro Arg Phe Ser His Pro Val Ser Ser Thr Pro Ile Ser	
290 295 300	
ccc gtc ttc ggt cct agt aac tgg cac aac ttc gtg cca cct gta aga	1201
Pro Val Phe Gly Pro Ser Asn Trp His Asn Phe Val Pro Pro Val Arg	
305 310 315	
gag gtg gtc cca acc cag ggt gct gac cct ctc ctc tac gga tcc ctc	1249
Glu Val Val Pro Thr Gln Gly Ala Asp Pro Leu Leu Tyr Gly Ser Leu	
320 325 330 335	
aac cct gtg cca atc ccc gcc cct gtt cgg aaa tgg gaa gac gtc gtc	1297
Asn Pro Val Pro Ile Pro Ala Pro Val Arg Lys Trp Glu Asp Val Val	
340 345 350	
gcg gcc cag cca caa cgg ctt gac act gca gac cct gcg atg ctg tat	1345
Ala Ala Gln Pro Gln Arg Leu Asp Thr Ala Asp Pro Ala Met Leu Tyr	
355 360 365	
gct gtg gtg gat ggc gtg cct ccg aca cgc tgg aag gag ttc atg cgg	1393
Ala Val Val Asp Gly Val Pro Pro Thr Arg Trp Lys Glu Phe Met Arg	
370 375 380	
ctc ctg ggg ctg agc gag cac gag atc gag cgg ttg gag ctg cag aac	1441
Leu Leu Gly Leu Ser Glu His Glu Ile Glu Arg Leu Glu Leu Gln Asn	
385 390 395	
ggg cgt tgc ctc cgc gag gct cat tac agc atg ctg gaa gcc tgg cgg	1489
Gly Arg Cys Leu Arg Glu Ala His Tyr Ser Met Leu Glu Ala Trp Arg	
400 405 410 415	
cgc cgc aca ccg cga cac gag gcc acg ctg gac gta gtg ggc cgc gtg	1537
Arg Arg Thr Pro Arg His Glu Ala Thr Leu Asp Val Val Gly Arg Val	
420 425 430	

ctt tgc gac atg aac ctg cgt ggc tgc ctg gag aac atc cgc gag act 1585
 Leu Cys Asp Met Asn Leu Arg Gly Cys Leu Glu Asn Ile Arg Glu Thr
 435 440 445

cta gaa agc cct gcc cac tcg tcc acg acc cac ctc ccg cga 1627
 Leu Glu Ser Pro Ala His Ser Ser Thr Thr His Leu Pro Arg
 450 455 460

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 <212> PRT
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<220>
 <223> Description of Artificial Sequence: raTNF-R8

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 35 40 45
 Tyr Ala His Pro Lys Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 50 55 60
 Gly Thr Tyr Leu Val Ser Asp Cys Pro Ser Pro Gly Gln Glu Thr Val
 65 70 75 80
 Cys Glu Leu Ser His Lys Gly Thr Phe Thr Ala Ser Gln Asn His Val
 85 90 95
 Arg Gln Cys Leu Ser Cys Lys Thr Cys Arg Lys Glu Met Phe Gln Val

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Lys	Asn	Gln	Phe	Gln	Arg	Tyr	Leu	Ser	Glu	Thr	His	Phe	Gln	Cys	Val		
130						135						140					
Asp	Cys	Ser	Pro	Cys	Phe	Asn	Gly	Thr	Val	Thr	Ile	Pro	Cys	Lys	Glu		
145						150						155					
Lys	Gln	Asn	Thr	Val	Cys	Asn	Cys	His	Ala	Gly	Phe	Phe	Leu	Ser	Gly		
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Lys	Leu	Cys	Leu	Pro	Pro	Val	Ala	Asn	Val	Thr	Asn	Pro	Gln	Asp	Ser		
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325						330						335					
Pro	Val	Pro	Ile	Pro	Ala	Pro	Val	Arg	Lys	Trp	Glu	Asp	Val	Val	Ala		
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355						360						365					
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				405						410						415			
Arg	Thr	Pro	Arg	His	Glu	Ala	Thr	Leu	Asp	Val	Val	Gly	Arg	Val	Leu				
			420					425					430						
Cys	Asp	Met	Asn	Leu	Arg	Gly	Cys	Leu	Glu	Asn	Ile	Arg	Glu	Thr	Leu				
		435					440					445							
Glu	Ser	Pro	Ala	His	Ser	Ser	Thr	Thr	His	Leu	Pro	Arg							
	450					455					460								

<210> 26
 <211> 2141
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: human TNF-R in
 1TNF-R2

<220>
 <221> CDS
 <222> (213)..(1577)

<400> 26
 gaattctctg gactgaggct ccagttctgg cctttggggt tcaagatcac tgggaccagg 60
 ccgtgatctc tatgcccagag tctcaaccct caactgtcac cccaaggcac ttgggacgtc 120
 ctggacagac cgagtcccgg gaagccccag cactgccgct gccacactgc cctgagccca 180
 katgggggag tgagaggcca tagctgtctg gc atg ggc ctc tcc acc gtg cct 233
 Met Gly Leu Ser Thr Val Pro
 1 5
 gac ctg ctg ctg cca ctg gtg ctc ctg gag ctg ttg gtg gga ata tac 281
 Asp Leu Leu Leu Pro Leu Val Leu Leu Glu Leu Leu Val Gly Ile Tyr
 10 15 20
 ccc tca ggg gtt att gga ctg gtc cct cac cta ggg gac agg gag aag 329
 Pro Ser Gly Val Ile Gly Leu Val Pro His Leu Gly Asp Arg Glu Lys
 25 30 35
 aga gat agt gtg tgt ccc caa gga aaa tat atc cac cct caa aat aat 377
 Arg Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn
 40 45 50 55
 tcg att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac 425
 Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp
 60 65 70
 tgt cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc 473
 Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly
 75 80 85
 tcc ttc acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc 521

Ser	Phe	Thr	Ala	Ser	Glu	Asn	His	Leu	Arg	His	Cys	Leu	Ser	Cys	Ser		
		90					95					100					
aaa	tgc	cga	aag	gaa	atg	ggc	cag	gtg	gag	atc	tct	tct	tgc	aca	gtg	569	
Lys	Cys	Arg	Lys	Glu	Met	Gly	Gln	Val	Glu	Ile	Ser	Ser	Cys	Thr	Val		
	105					110				115							
gac	cgg	gac	acc	gtg	tgt	ggc	tgc	agg	aag	aac	cag	tac	cgg	cat	tat	617	
Asp	Arg	Asp	Thr	Val	Cys	Gly	Cys	Arg	Lys	Asn	Gln	Tyr	Arg	His	Tyr		
120					125				130						135		
tgg	agt	gaa	aac	ctt	ttc	cag	tgc	ttc	aat	tgc	agc	ctc	tgc	ctc	aat	665	
Trp	Ser	Glu	Asn	Leu	Phe	Gln	Cys	Phe	Asn	Cys	Ser	Leu	Cys	Leu	Asn		
			140					145						150			
ggg	acc	gtg	cac	ctc	tcc	tgc	cag	gag	aaa	cag	aac	acc	gtg	tgc	acc	713	
Gly	Thr	Val	His	Leu	Ser	Cys	Gln	Glu	Lys	Gln	Asn	Thr	Val	Cys	Thr		
			155					160					165				
tgc	cat	gca	ggc	ttc	ttt	cta	aga	gaa	aac	gag	tgt	gtc	tcc	tgt	agt	761	
Cys	His	Ala	Gly	Phe	Phe	Leu	Arg	Glu	Asn	Glu	Cys	Val	Ser	Cys	Ser		
		170					175					180					
aac	tgt	aag	aaa	agc	ctg	gag	tgc	acg	aag	ttg	tgc	cta	ccc	cag	att	809	
Asn	Cys	Lys	Lys	Ser	Leu	Glu	Cys	Thr	Lys	Leu	Cys	Leu	Pro	Gln	Ile		
	185					190					195						
gag	aat	gtt	aag	ggc	act	gag	gac	tca	ggc	acc	aca	gtg	ctg	ttg	ccc	857	
Glu	Asn	Val	Lys	Gly	Thr	Glu	Asp	Ser	Gly	Thr	Thr	Val	Leu	Leu	Pro		
200					205				210						215		
ctg	gtc	att	ttc	ttt	ggc	ctt	tgc	ctt	tta	tcc	ctc	ctc	ttc	att	ggc	905	
Leu	Val	Ile	Phe	Phe	Gly	Leu	Cys	Leu	Leu	Ser	Leu	Leu	Phe	Ile	Gly		
			220					225						230			
tta	atg	tat	cgc	tac	caa	cgg	tgg	aag	tcc	aag	ctc	tac	tcc	att	gtt	953	
Leu	Met	Tyr	Arg	Tyr	Gln	Arg	Trp	Lys	Ser	Lys	Leu	Tyr	Ser	Ile	Val		
			235					240					245				
tgt	ggg	aaa	tcg	aca	cct	gaa	aaa	gag	ggg	gag	ctt	gaa	gga	act	act	1001	
Cys	Gly	Lys	Ser	Thr	Pro	Glu	Lys	Glu	Gly	Glu	Leu	Glu	Gly	Thr	Thr		
		250					255					260					
act	aag	ccc	ctg	gcc	cca	aac	cca	agc	ttc	agt	ccc	act	cca	ggc	ttc	1049	
Thr	Lys	Pro	Leu	Ala	Pro	Asn	Pro	Ser	Phe	Ser	Pro	Thr	Pro	Gly	Phe		
	265					270					275						
acc	ccc	acc	ctg	ggc	ttc	agt	ccc	gtg	ccc	agt	tcc	acc	ttc	acc	tcc	1097	
Thr	Pro	Thr	Leu	Gly	Phe	Ser	Pro	Val	Pro	Ser	Ser	Thr	Phe	Thr	Ser		
280					285				290						295		
agc	tcc	acc	tat	acc	ccc	ggc	gac	tgt	ccc	aac	ttt	gcg	gct	ccc	cgc	1145	
Ser	Ser	Thr	Tyr	Thr	Pro	Gly	Asp	Cys	Pro	Asn	Phe	Ala	Ala	Pro	Arg		
				300					305					310			
aga	gag	gtg	gca	cca	ccc	tat	cag	ggg	gct	gac	ccc	atc	ctt	gcg	aca	1193	
Arg	Glu	Val	Ala	Pro	Pro	Tyr	Gln	Gly	Ala	Asp	Pro	Ile	Leu	Ala	Thr		

315	320	325	
gcc ctc gcc tcc gac ccc atc ccc aac ccc ctt cag aag tgg gag gac			1241
Ala Leu Ala Ser Asp Pro Ile Pro Asn Pro Leu Gln Lys Trp Glu Asp			
330	335	340	
agc gcc cac aag cca cag agc cta gac act gat gac ccc gcg acg ctg			1289
Ser Ala His Lys Pro Gln Ser Leu Asp Thr Asp Asp Pro Ala Thr Leu			
345	350	355	
tac gcc gtg gtg gag aac gtg ccc ccg ttg cgc tgg aag gaa ttc gtg			1337
Tyr Ala Val Val Glu Asn Val Pro Pro Leu Arg Trp Lys Glu Phe Val			
360	365	370	375
cgg cgc cta ggg ctg agc gac cac gag atc gat cgg ctg gag ctg cag			1385
Arg Arg Leu Gly Leu Ser Asp His Glu Ile Asp Arg Leu Glu Leu Gln			
380	385	390	
aac ggg cgc tgc ctg cgc gag gcg caa tac agc atg ctg gcg acc tgg			1433
Asn Gly Arg Cys Leu Arg Glu Ala Gln Tyr Ser Met Leu Ala Thr Trp			
395	400	405	
agg cgg cgc acg ccg cgg cgc gag gcc acg ctg gag ctg ctg gga cgc			1481
Arg Arg Arg Thr Pro Arg Arg Glu Ala Thr Leu Glu Leu Leu Gly Arg			
410	415	420	
gtg ctc cgc gac atg gac ctg ctg ggc tgc ctg gag gac atc gag gag			1529
Val Leu Arg Asp Met Asp Leu Leu Gly Cys Leu Glu Asp Ile Glu Glu			
425	430	435	
gcg ctt tgc ggc ccc gcc gcc ctc ccg ccc gcg ccc agt ctt ctc aga			1577
Ala Leu Cys Gly Pro Ala Ala Leu Pro Pro Ala Pro Ser Leu Leu Arg			
440	445	450	455
tgaggctgcg cccctgcggg cagctctaag gaccgtcctg cgagatcgcc ttccaacccc			1637
acttttttct ggaaaggagg ggtcctgcag gggcaagcag gagctagcag ccgcctactt			1697
ggtgctaacc cctcgatgta catagctttt ctcagctgcc tgcgcgccgc cgacagtcag			1757
cgtgtgcgc gcggagagag gtgcgccgtg ggctcaagag cctgagtggg tggtttgcca			1817
ggatgaggga cgctatgcct catgcccggt ttgggtgtcc tcaccagcaa ggctgctcgg			1877
gggccccctgg ttcgtccctg agcctttttc acagtgcata agcagttttt tttgtttttg			1937
ttttgttttg tttgtttttt aaatcaatca tgttacacta atagaaactt ggcactcctg			1997
tgccctctgc ctggacaagc acatagcaag ctgaactgtc ctaaggcagg ggcgagcacg			2057
gaacaatggg gccttcagct ggagctgtgg acttttgtac atacactaaa attctgaagt			2117
taaaaaaaaa aaaaaaagga attc			2141

<210> 27
<211> 455

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: human TNF-R in
1TNF-R2

<400> 27

Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
1 5 10 15

Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
20 25 30

His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
35 40 45

Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
50 55 60

Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
65 70 75 80

Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
85 90 95

Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
100 105 110

Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
115 120 125

Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
130 135 140

Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
145 150 155 160

Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
165 170 175

Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
180 185 190

Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser
195 200 205

Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu
210 215 220

Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys
225 230 235 240

Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu
245 250 255

Gly Glu Leu Glu Gly Thr Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser

260		265		270
Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val				
275		280		285
Pro Ser Ser Thr Phe Thr Ser Ser Ser Thr Tyr Thr Pro Gly Asp Cys				
290		295		300
Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly				
305		310		315
				320
Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn				
		325		330
				335
Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp				
		340		345
				350
Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Val Glu Asn Val Pro Pro				
		355		360
				365
Leu Arg Trp Lys Glu Phe Val Arg Arg Leu Gly Leu Ser Asp His Glu				
		370		375
				380
Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln				
385		390		395
				400
Tyr Ser Met Leu Ala Thr Trp Arg Arg Arg Thr Pro Arg Arg Glu Ala				
		405		410
				415
Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly				
		420		425
				430
Cys Leu Glu Asp Ile Glu Glu Ala Leu Cys Gly Pro Ala Ala Leu Pro				
		435		440
				445
Pro Ala Pro Ser Leu Leu Arg				
450		455		

<210> 28

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: N-terminal
amino acid sequence of protein purified from urine
(main sequence)

<220>

<221> UNSURE

<222> (4)

<223> identity of "Xaa" could not be determined

<400> 28

Asp Ser Val Xaa Pro Gln Gly Lys Tyr Ile His Pro Gln
1 5 10

<210> 29
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: N-terminal
amino acid sequence of protein purified from urine
(subsidiary sequence)

<220>
<221> UNSURE
<222> (7)
<223> identity of "Xaa" could not be determined

<400> 29
Leu Val Pro His Leu Gly Xaa Arg Glu
1 5

<210> 30
<211> 151
<212> DNA
<213> Homo sapiens

<400> 30
caggggaaaa tattcaccct caaataattc gatttgctgt accaagtgcc acaaaggaaa 60
ctacttgtag aatgactgtc caggcccggg gcaggatagc gactgcaggg agtgtgagag 120
cggctccttc acagcctcag aaaacaacaa g 151

<210> 31
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 31
Asp Ser Val Cys Pro Gln Gly Lys
1 5

<210> 32
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>
 <221> UNSURE
 <222> (1)..(2)
 <223> identity of "Xaa" could not be determined

 <400> 32
 Xaa Xaa Leu Ser Cys Ser Lys
 1 5

 <210> 33
 <211> 7
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <400> 33
 Asp Thr Val Cys Gly Cys Arg
 1 5

 <210> 34
 <211> 11
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <400> 34
 Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys
 1 5 10

 <210> 35
 <211> 12
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <400> 35
 Glu Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys
 1 5 10

 <210> 36
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>
<221> UNSURE
<222> (6)
<223> identity of "Xaa" could not be determined

<220>
<221> UNSURE
<222> (10)..(12)
<223> identity of "Xaa" could not be determined

<400> 36
Tyr Ile His Pro Gln Xaa Asn Ser Ile Xaa Xaa Xaa Lys
1 5 10

<210> 37
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 37
Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn Asn Lys
1 5 10

<210> 38
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 38
Leu Val Pro His Leu Gly Asp Arg
1 5

<210> 39
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 39

Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg
1 5 10 15

<210> 40

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 40

Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln
1 5 10

<210> 41

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>

<221> UNSURE

<222> (9)..(11)

<223> identity of "Xaa" could not be determined

<400> 41

Glu Met Gly Gln Val Glu Ile Ser Xaa Xaa Xaa Val Asp
1 5 10

<210> 42

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 42

Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp Arg Asp
1 5 10 15

Thr Val Cys Gly
20

<210> 43

<211> 19

<212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <220>
 <221> UNSURE
 <222> (6)
 <223> indentity of "Xaa" could not be determined

 <220>
 <221> UNSURE
 <222> (18)
 <223> identity of "Xaa" could not be determined

 <400> 43
 Tyr Ile His Pro Gln Xaa Asn Ser Ile Cys Cys Thr Lys Cys His Lys
 1 5 10 15

Gly Xaa Tyr

<210> 44
 <211> 18
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <220>
 <221> UNSURE
 <222> (16)..(17)
 <223> identity of "Xaa" could not be determined

 <400> 44
 Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Xaa
 1 5 10 15

Xaa Arg

<210> 45
 <211> 8
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic
 cleavage peptide

 <400> 45

Leu Cys Leu Pro Gln Ile Glu Asn
1 5

<210> 46
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<220>
<221> UNSURE
<222> (7)
<223> identity of "Xaa" could not be determined

<400> 46
Gln Asn Thr Val Cys Thr Xaa His Ala Gly Phe Phe Leu Arg
1 5 10

<210> 47
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 47
Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu Asn
1 5 10

<210> 48
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 48
Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln
1 5 10

<210> 49
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 49

Gln Gly Lys Tyr Ile His Pro
1 5

<210> 50

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 50

caaggtaa atattcatcc

20

<210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 51

cagggtaagt acatccatcc

20

<210> 52

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 52

caaggtaa atatacatcc

20

<210> 53

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 53

caaggcaaat atattcatcc

20

<210> 54

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 54

cagggcaagt acatccaccc

20

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 55

caaggcaaat atatacatcc

20

<210> 56

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 56

caaggaaaat atattcatcc

20

<210> 57

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 57

cagggaaagt acatccaccc

20

<210> 58

<211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 58
 caaggaaaat atatacatcc 20

 <210> 59
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 59
 caagggaaat atattcatcc 20

 <210> 60
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 60
 caggggaagt acatccaccc 20

 <210> 61
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 61
 caagggaaat atatacatcc 20

 <210> 62
 <211> 14
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: TNF-BP tryptic

cleavage peptide

<400> 62

Glu Cys Gly Ser Gly Ser Phe Thr Ala Ser Glu Asn Asn Lys
1 5 10

<210> 63

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 63

Glu Cys Gly Ser Gly Ser Phe Thr Ala Ser Cys Asn Asn Lys
1 5 10

<210> 64

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 64

Phe Thr Ala Ser Glu Asn Asn Lys
1 5

<210> 65

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNF-BP tryptic
cleavage peptide

<400> 65

Phe Thr Ala Ser Cys Asn Asn Lys
1 5

<210> 66

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: hybridization
probe

<400> 66
aaatgacgga gactcttggt gttcctaggg 30

<210> 67
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 67
aagtggcgta gtcttttggt gttcctaggg 30

<210> 68
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 68
aaatgtcgga gactcttggt gttcctaggg 30

<210> 69
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 69
aaatgacggt cactcttggt gttcctaggg 30

<210> 70
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybridization
probe

<400> 70
aagtggcggt ctcttttggt gttcctaggg 30

<210> 71
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 71
 aaatgtcggg cactcttggt gttcctaggg 30

 <210> 72
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 72
 aaatgacgga gaacattggt gttcctaggg 30

 <210> 73
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 73
 aagtggcgta gtactttggt gttcctaggg 30

 <210> 74
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: hybridization
 probe

 <400> 74
 aaatgtcggg gaacattggt gttcctaggg 30

 <210> 75
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization probe

<400> 75
 aaatgacggt caacattggt gttcctaggg 30

<210> 76
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization probe

<400> 76
 aagtggcggt ctactttggt gttcctaggg 30

<210> 77
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: hybridization probe

<400> 77
 aaatgtcggt caacattggt gttcctaggg 30

<210> 78
 <211> 158
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(153)

<400> 78
 cag ggg aaa tat att cac cct caa aat aat tcg att tcg tgt acc aag 48
 Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Ser Cys Thr Lys
 1 5 10 15

tcg cac aaa gga acc tac ttg tac aat gac tgt cca ggc ccg ggg cag 96
 Ser His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln
 20 25 30

gat acg gac tgc agg gag tgt gag agc ggc tcc ttc aca gcc tca gaa 144
 Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu
 35 40 45

aac aac aag gatcc 158

Asn Asn Lys
50

<210> 79
<211> 51
<212> PRT
<213> Homo sapiens

<400> 79
Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser Ile Ser Cys Thr Lys
1 5 10 15
Ser His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln
20 25 30
Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu
35 40 45

Asn Asn Lys
50

<210> 80
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer
EBI-1786

<400> 80
ggaattcagc ctgaatggcg aatggg 26

<210> 81
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer
EBI-1729

<400> 81
cctcgagcgt tgctggcggt tttcc 25

<210> 82
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer
EBI-1733

<400> 82
 ggtcgacatt gattattgac tag 23

<210> 83
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR primer
 EBI-1734

<400> 83
 ggaattccct aggaatacag cgg 23

<210> 84
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: mutagenesis
 primer EBI-1751

<400> 84
 gtacttgaac tcgttctg 19

<210> 85
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: mutagenesis
 primer EBI-1857

<400> 85
 ggcaagggca gcagccgg 18

<210> 86
 <211> 53
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 oligonucleotide EBI-1823

<400> 86
 agcttctgca ggtcgacatc gatggatcgg tacctcgagc ggccgcgaat tct 53

<210> 87
 <211> 54
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide EBI-1829

 <400> 87
 ctagagaatt cgcggccgct cgaggtaccg gatccatcga tgcgacctg caga 54

 <210> 88
 <211> 63
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide EBI-1820

 <400> 88
 agctctagag attcgcggcc gtcgaggta ccgatccat cgatgtcgac ctgcagaagc 60
 ttg 63

 <210> 89
 <211> 64
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide EBI-1821

 <400> 89
 ctagcaagct tctgcaggtc gacatcgatg gatccggtac ctcgagcggc cgcgaattct 60
 ctag 64

 <210> 90
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: PCR primer
 EBI-1986

 <400> 90
 caggatccga gtctcaaccc tcaac 25

 <210> 91

<211> 43
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-1929

<400> 91
gggaattcct tatcaattct caatctgggg taggcacaac ttc

43

<210> 92
<211> 81
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-2452

<400> 92
cacagtcgac ttacatttgc ttctgacaca actgtgttca ctagcaacct caaacagaca 60
ccatgggcct ctccaccgtg c

81

<210> 93
<211> 17
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-1922

<400> 93
gaggctgcaa ttgaagc

17

<210> 94
<211> 17
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-2316

<400> 94
attcgtgcgg cgcctag

17

<210> 95
<211> 17
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-2467

<400> 95

gtcggtagca ccaagga

17

<210> 96

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: M13-40
universal primer

<400> 96

gttttcccag tcacgac

17

<210> 97

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer
EBI-2112

<400> 97

gtccaattat gtcacacc

18